

THAT WHICH IS CLAIMED:



1. A bearing assembly, comprising:
a pair of bearing members movable relative to one another, said pair including a first member and a second member that define a space therebetween, at least
10 said first member having a bearing surface having a relatively thin coating of a polytetrafluoroethylene-based material thereupon; and

a grease lubricant occupying the space defined between the first member and the second member, wherein the polytetrafluoroethylene-based material and the grease lubricant act in conjunction with one another to lubricate the first and second
15 members.

2. A bearing assembly according to Claim 1, wherein the coating is a polytetrafluoroethylene-based material having a solid particulate in a form selected from the group consisting of flocked, powdered, fibrous, flaked, beaded, and combinations
20 thereof. 112-2NL

3. A bearing assembly according to Claim 1, wherein the coating has a thickness of about 0.003-0.007 inch.

4. A bearing assembly according to Claim 1, wherein the first member is formed from the group consisting of steel, titanium, aluminum, nickel, bronze, and alloys
25 thereof.

5. A bearing assembly according to Claim 1, further comprising a seal
30 positioned in the space defined between the first member and the second member.

6. A bearing assembly according to Claim 1, wherein the coating is a self-lubricating material.

5 7. A bearing assembly for a truck pivot joint bearing in an aircraft landing gear, the assembly comprising:
a metallic truck assembly²⁰ defining an opening³⁴ therein;
a pin²⁴ rotatably positioned in the opening of the truck assembly;
a truck pivot bushing³⁰ positioned at least partially in the opening defined by
10 the truck assembly, the truck pivot bushing having an inner surface proximate said pin such that a space is defined between the inner surface of the truck pivot bushing and the pin, at least a portion of the inner surface of the truck pivot bushing²⁴ having a relatively thin coating of a self-lubricating, greaseless material; and
a grease lubricant occupying the space defined between the pivot bushing
15 and the pin.

8. A bearing assembly according to Claim 7, wherein the coating is a polytetrafluoroethylene-based material.

20 9. A bearing assembly according to Claim 8, wherein the coating has a solid particulate in a form selected from the group consisting of flocked, powdered, fibrous, flaked, beaded, and combinations thereof.

10. A bearing assembly according to Claim 7, wherein the coating has a
25 thickness of about 0.003-0.007 inch.

11. A bearing assembly according to Claim 7, wherein the pivot bushing is formed from the group consisting of steel, titanium, aluminum, nickel, bronze, and alloys thereof.

12. A bearing assembly according to Claim 7, further comprising a seal positioned in the space defined between the truck assembly and the pin.

13. A method of manufacturing a bearing assembly having a pair of bearing
35 members movable relative to one another, the method comprising:

5 applying a relatively thin coating of a self-lubricating, greaseless material
on a portion of a first member of the pair of bearing members;

positioning a second member of the pair of bearing members proximate
the first member to define a space therebetween; and

10 introducing a grease lubricant between the first member and the second
member such that the grease lubricant substantially occupies the space defined
therebetween.

14. A method according to Claim 13, wherein the grease lubricant introducing
step includes introducing an extreme pressure grease.

15 15. A method according to Claim 13, wherein the applying step includes
coating the first member with a polytetrafluoroethylene-based material.

20 16. A method according to Claim 13, further comprising removing the bearing
assembly from an aircraft landing gear before said applying step, whereby the greaseless
material and the grease lubricant are retrofitted in existing aircraft landing gear.

25 17. A method of lubricating a bearing assembly having a pair of bearing
members movable relative to one another, the method comprising:

positioning the pair of bearing members proximate each other to define a
space therebetween;

applying a coating of a polytetrafluoroethylene-based, greaseless material
to at least a portion of one of the members of the pair of members; and

30 introducing a grease lubricant so as to occupy the space defined between
the members, wherein the grease lubricant is in contact with the coating of greaseless
material.

35 18. A method according to Claim 17, further comprising removing the bearing
assembly from an aircraft landing gear before said applying step, whereby the greaseless
material and the grease lubricant are retrofitted in existing aircraft landing gear.